5430i Series

Self Propelled Sprayer

JOHN DEERE

Customer driven solutions

John Deere is at the forefront of customer led solutions which are designed to meet the demands of farming today and in the future. Our i-Solutions offer customers a totally new way of managing their operations and deliver measurable productivity and financial benefits.

Integrated components and agricultural management data can be transferred from one machine to another and from one farming application to another. So your tractor that seeds the field or the combine that harvests the crop can provide valuable information to the 5430i sprayer for spray application planning. It's all part of a fully integrated approach to farming that includes everything from the dealer who maintains your sprayer to the credit to finance your business.

i solutions
intelligent innovative integrated

Table of Contents

Customer driven solutions	2 – 3
How can I get the reliability I need?	4 – 5
Want to cover more hectares?	6 – 7
Straightforward to operate?	8 – 9
Confident of good spray accuracy?	10 – 11
Spraying in different conditions?	12 – 13
Environmentally compliant?	14 – 15
Why buy John Deere?	16 – 17
Detailed Specifications	18 – 19

How can I get the reliability I need?

You can trace today's sprayer reliability back to 1947. Ever since then we have been refining our manufacturing and field testing as part of a continuous process of product improvement.

Today we have a worldwide sprayer development programme with manufacturing facilities in North America and Europe. The scale of our operations means the core competencies are in our hands. We can leverage proven core components from other John Deere product platforms, plus we use the latest computer design and development tools to identify and eliminate potential stress points at an early design stage. We test our sprayers during a comprehensive product verification and validation programme at the factory, at official research institutes and in the field. Finally our state-of-the-art manufacturing facilities with pre-delivery auditing and inspection ensure every sprayer meets our stringent quality standards and our customer's demands and expectations on durability and reliability.

But reliability doesn't stop there. Our network of factory trained sprayer specialists will keep your sprayer performing as good as the day it left the factory.

Field proven core components

Boom design leveraged from the 800 Series trailed sprayers

Cab derived from the 5000 Series tractors

Engine from the 7030 Premium Series tractors

Chassis, suspension and drivetrain developed from North American self propelled sprayer

Reliability is built in

John Deere invests more in research and development than other agricultural equipment manufacturers. Add to this over 60 years experience in designing and building sprayers and you can understand why "Reliability is our Strength".

More power and control when you need it
The 158 kW (215 HP) PowerTech Plus engine produces 7% extra power when needed, so you'll keep moving at a constant speed over steep hills and through tough, wet soil conditions even with a fully loaded sprayer. The hydrostatic drive train with optional traction control helps you to maintain traction on really tough ground.

Will I be able to cover more hectares?

John Deere has been at the forefront of farming productivity, introducing new technology so you can get more out of the day. Big tanks and wide booms are part of the story but what really counts is the ground you cover.

Higher productivity starts with the 700 litre fast fill pump. Chemicals can be incorporated quickly with the EcoMatic closed chemical transfer filling connection. The fully suspended chassis plus hydraulic tread adjust enables you to fly from one job to the next while keeping you versatile in matching different tramline systems and row spacings. Higher spraying speeds can be achieved without compromising spray accuracy. The trailer hitch boosts capacity without adding additional weight to the sprayer itself. The Solution Command System with multi cycle rinsing capability ensures proper cleaning of the entire sprayer and get's you quickly prepared for the next spray job.

Range	Field conditions	Speed
1st	Tough field conditions, soft wet soil, steep hills	0 – 15 km/h
2nd	Normal field conditions	0 – 20 km/h
3rd	Transport	0 – 25 km/h
4th	High speed transport	0 – 40 km/h

Four speed ranges
For spraying or transport, the 5430i gives you the right range for the job.

Designed for productivity

Tow a water bowser for extra capacity

Solution Command: Fast and easy liquid handling

Fast road transport
The weather conditions are just right, the crop is ready, so you need to go at a moment's notice. The 5430i has a dependable PowerTech engine built by John Deere at our engine plant in France. Combined with a reliable, powerful drivetrain allowing up to 40 km/h on the road the 5430i is designed to spend more productive time in the field spraying.

Sprayer Pro
Sprayer Pro cuts down on wasted chemicals by automatically switching off boom sections if you enter a previously sprayed area on irregular shaped fields or go outside field boundaries. It also automatically switches the master valve on and off at the headland making operation easier.

Will it be straightforward to set up and operate?

We recognise spraying is probably the most demanding task on the farm. Apart from driving the sprayer and managing a large boom, you need to control numerous functions. That's why we've brought all our tractor cab experience to make the 5430i the best operating environment of any sprayer. It's spacious, quiet and comfortable. You'll also really appreciate the all-round visibility which gives you a clear view of the boom.

All the controls are logically positioned and ergonomically designed for ease of use. Use the advanced GreenStar 2600 touch screen display to set-up your vehicle and wet system. Take the Hydro Handle to control ground speed, individual boom sections, boom height or tilt and more – all with one hand. When you add to this a high degree of automated systems, you'll find the 5430i takes the stress out of spraying.

Faster filling and rinsing

The advanced Solution Command System means you spend more time spraying and less time filling and rinsing. Set-up via the GreenStar display and either controlled from inside the cab or outside at the operator station, it provides full control of all sprayer functions from filling, incorporating chemical up to rinsing.

Ergonomic control
The spacious and well laid cab brings you all our legendary tractor experience. Quiet, comfortable there's excellent all-round visibility. All controls are ergonomically positioned just were you need them.

The hydro handle puts critical control functions in the palm of your hand for easy, stress-free operation.

Can I be confident of good spray accuracy?

The accuracy of the 5430i is down to a combination of industry leading boom stability, an air suspended vehicle and the John Deere i-Solutions spraying package:

AutoTrac – automatic steering ensures perfect tramlines every time. It reduces overlap and minimises skips, saves expensive chemicals, cuts down on crop damage and reduces operator fatigue during long working days.

BoomTrac – increases productivity by enabling you to use wider booms and maximises spray accuracy and efficiency by automatically maintaining a more consistent boom height above the crop, increasing leaf coverage and penetration while reducing drift.

Sprayer Pro – automatically switches boom sections and the master on/off when you pass through an area you've sprayed previously e.g. on irregular shaped fields or at the headland, preventing over- and under dosing and wasted chemicals.

The added advantage of our John Deere i-Solution package is you get the same accuracy spraying in low light or even at night when the weather conditions are often more favorable with less drift and better spray contact.

Advanced boom suspension
The central pendulum system is the secret to spray accuracy. In conjunction with the high tensile, three dimensional boom design it provides utmost boom stability under any spraying conditions. Our pendulum design has been leveraged from the 800 Series trailed sprayers and includes shock absorbers and an anti-yaw system, which isolates boom movement from the machine and provides superior boom stability and spray accuracy.

Vehicle suspension
The independent wheel strut suspension with air bag springs and auto load levelling system absorbs shocks when spraying on rough, uneven terrain while maintaining a stable boom and supporting the boom pendulum system.

Rock solid booms
Available in widths from 24 to 36 m in a double folded configuration, the heavy duty booms are built using high strength steel and our advanced coating process, so you'll enjoy years of trouble free performance. Independently tested by the BBA this was shown to be the most stable boom in a competitive comparison.

Enjoy automatic business documentation

Who wants to do tremendous paperwork before spraying starts and after a long day in the field? Thanks to our FieldDoc software you don't have to. With FieldDoc and our preferred software partners you can plan your spray job in the office, export to a Compact Flash Card and upload the data into the GreenStar display. All your documentation is done for you while you're spraying. FieldDoc automatically records all your spray applications which is ideal for farm management and crop traceability. Variable application rates are just as easily and accurately recorded with Spray-to-Map.

1. Just prepare your spraying tasks in the office with the desktop software and export to a Compact Flash card.
2. Insert the Compact Flash Card into the display, select a pre-defined task and start spraying immediately.
3. Remove the card from the display and re-import the recorded data into your office software.

Automatic systems make spraying easier
Solution Command System for automatic filling and rinsing. AutoTrac for automatic steering. BoomTrac for automatic boom tilt and height control. Sprayer Pro for automatic boom section and master control. FieldDoc for automatic documentation.

Reduced crop damage
With a high ground clearance, a smooth underside protection and shielding around the wheel motors the 5430i will get you over tall, high value crops with minimal damage.

What if I want to spray in different conditions?

Every field is different. That's why we built the 5430i with a versatile steering system and hydraulic tread adjustment so you can handle all sorts of different field sizes, row spacings and tramline systems with minimal crop damage.

The multi mode steering system lets you choose between 2-wheel steer, 4-wheel steer or crab steer. The multi-mode 4-wheel steer gives you a tight turning radius even on small headlands but still minimises crop damage. When you get to the end of a field the switch from 2-wheel to 4-wheel steer can either be fully automated via the Headland Management System (HMS) or you can change manually using the conveniently placed foot switch. And, if you're finding it difficult to keep the sprayer on track on hillsides, you'll find the crab steering mode a useful option.

Push button tread change
The optional hydraulic tread adjustment means you can adjust the tread on-the-go (at speeds from 1 to 10 km/h) from 1.80 m up to 2.85 m, depending on tyre sizes.

Versatile boom folding options
The booms can be opened to full or reduced width. The outer segments can be unfolded or folded independently to avoid collision with obstacles or to spray narrow headlands.

Smooth undersides
The sprayer features underside crop protection and wheel motor shielding to ensure smooth crop sliding for reduced crop damage.

Tight turn radius
4 –wheel steer gives you excellent manoeuvrability

How can I meet increasingly tougher environmental regulations?

Caring for and protecting our environment is essential for the future of farming and John Deere takes its role very seriously. The 5430i has passed an independent evaluation by the European Network for Agricultural Machinery (ENTAM). This comprehensive test covered everything from spray distribution quality and the accuracy of measuring devices to the cleaning and rinsing of empty containers with the chemical inductor. So you can be confident that your 5430i meets all current environmental regulations.

Traceability from the field to the plate
Now you can give reliable and comprehensive documentation of all your different spray tasks. FieldDoc automatic documentation provides you with a detailed record of every single application and ensures maximum traceability with minimal input.

Effective Chemical Residue Management
The Solution Command System with automatic multi cycle dilution capability minimises environmental contamination by thoroughly washing out the sprayer and removing any trace of chemical residues.

i-Solutions
John Deere i-Solutions (AutoTrac, BoomTrac, Sprayer Pro and FieldDoc) deliver outstanding spray accuracy so no chemicals are unnecessarily wasted and the optimum dosage is always delivered.

Professional servicing
Our factory trained sprayer service specialists at your sprayer expert dealership perform regular inspections to ensure that your 5430i will continue to perform as good as the day it left the factory.

Rigorous environmental compliance
Consideration for the environment was a fundamental design requirement for the 5430i from the original design concept.

Why should I buy a John Deere sprayer?

There is no single reason for buying a John Deere sprayer. You have to look at the whole intelligent, innovative and integrated solution package. Ask yourself how many manufacturers have a worldwide sprayer development programme which tests in all conditions. How many offer advanced electronic control systems which integrate seamlessly to simplify operation, improve spray quality and provide business documentation? And how many bring you premium tractor refinement and comfort? We've listed some of the many benefits of choosing a John Deere sprayer but we recommend you experience them for yourself. So why not call your nearest John Deere dealer for a demonstration?

1. **Reliability and durability**
   - We design and build all the core components – engine, transmission, cab, axles, booms and control systems
   - Structured product development and testing process
   - Advanced design analysis (FEA) in conjunction with stress coating and measurement testing/onsite field testing
2. **Productivity**
   - Independent wheel strut suspension with air bags and auto load levelling
   - Hydrostatic drive train with mechanical final drives and traction control
   - Fast, 40 km/h transport speed, 20 km/h spraying speed
   - Wide range of spray booms
   - Multiple pump options
   - Trailer hitch option for greater capacity
3. **Comfort and convenience**
   - 5000 Series tractor cab for better comfort with CommandArm and GreenStar 2 control
4. **Spray accuracy**
   - i-Solutions (AutoTrac, BoomTrac, Sprayer Pro)
   - Industry leading boom stability
   - Pressure circulation with pneumatic nozzle control
   - Pressure and flow based rate control
5. **Versatility**
   - Hydraulic tread adjust option
   - High ground clearance
6. **Minimum crop damage/soil clearance**
   - Multimode 4-wheel steering
   - Complete underside protection
7. **Environmental protection**
   - Solution Command System for automatic filling and multi cycle rinsing
   - FieldDoc with variable rate application and Spray-to-Map capability
   - ENTAM tested

i-solutions for the 5430i

No other manufacturer has such a comprehensive range of i-Solutions to meet the challenges of modern farming. John Deere has pioneered the development of automatic control systems for more than 10 years and we offer the only system that is truly integrated with components that can be shared between different product platforms and across different farming applications.

With the 5430i you not only benefit from intelligent built-in i-Solutions like AutoTrac, BoomTrac and Sprayer Pro, but you also enjoy fully integrated documentation and management information. This helps you to manage your business more cost efficient and better service the increasing demands of your operations to increase profit margins.

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Specifications

Engine	
Model	John Deere PowerTech Plus Diesel, Tier III
Horsepower	215 hp (158 kW)
Power bulge	230 hp (169 kW)
Engine rated speed (field/road)	2100/1900 rpm
Number of cylinders	6
Displacement	6.8 L
Cooling system	Pressurised liquid
Fuel tank	
Capacity	290 L
Drive system	
Type	Variable hydrostatic (dual pumps)
Wheel motors	4 with variable displacement
Shifting	4-range, electro-hydraulic, shift on-the-go
Traction control	Option
Ground speed	
1st Range	0 – 15 km/h
2nd Range	0 – 20 km/h
3rd Range	0 – 25 km/h
4th Range	0 – 40 km/h
Spraying System	
Solution tank material	Polyethylene
Solution tank capacity	4000 L
Agitation	High pressure agitators, independent from spray pressure
Rinse tank capacity	400 l
Hand wash tank	20 l
Tank level control	Digital tank level sensor with automatic fill shut-off
Boom recirculation	pressure circulation with pneumatic nozzle shut-off (option)
Sprayer pumps	
Solution pump(s)	piston diaphragm pump(s): 280 l/min or 560 l/min
Filling pump option	centrifugal pump – 700 l/min (option with 280 l/min solution pump)
Spray boom - section valves	
Type	Motorised seat valves or pneumatic nozzle shut-off (option)
Rate - control system	
Make and model	John Deere GreenStar 2 automatic rate control system
Type	pressure and flow-based

Hydraulic system (auxiliary functions)	
Type	Closed centre, pressure compensated load sense system
Pump	Axial-piston with variable displacement
Steering	
Type	Hydrostatic
Turning radius (1.80 m tread – 4ws)	4.5 m
Tyres	
Flotation tyres	Wide range of different tyres
Narrow row-crop	Wide range of different tyres
Suspension	
Type	Independent strut with adjustable air springs
Travel	± 10 cm
Tread adjustment	
Range of adjustment	1.80 m – 2.50/2.00 – 2.70/2.15 – 2.85 m (depending on tyre size)
Type	Manual or Hydraulic (option), independently adjustable front/rear
Cab	
Heating and ventilation	Pressurized cab, heating, air conditioning and active carbon filtration
Seat	Air suspended seat
Spray boom control	
Height control	Electro-hydraulic
Boom tilt	Electro-hydraulic
Booms	
Type	24 – 36 m (double fold configuration)
Construction	Tubular 3-D steel design
Folding	Auto Fold Sequence, electro-hydraulically operated through HydroHandle
Boom height	50 – 250 cm (depending on tyre size)
Suspension	Pendulum system wirth anti-yaw system
Nozzles	Pentajet nozzle bodies with bayonet couplings for nozzle caps
	Diaphragm anti-drip system or pneumatic nozzle shut off
Machine Dimensions	
Total length (with 36/18 m boom)	9.10 m
Max transport width	3.00 m
Max. transport height	3.75 m (with tyre 520/85R42, beacon light removed)
Ground clearance	1.10 m (with tyre 520/85R42)
Empty weight	11500 kg

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JOHN DEERE CREDIT

"Take the credit for buying the best"
John Deere Credit – A range of finance options as powerful as our products. Contact your John Deere dealer for a comprehensive range of finance options to suit the specific needs of your business.

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YY0914703E 12/08 1/1/2